

Algebra II: Chapter 8 Closure

SHOW ALL WORK ON A SEPARATE SHEET!!!!!!

1. Factor and use the Zero Product Property to find the roots of the following quadratic equations.

a. $0 = x^2 - 7x + 12$

e. $2x^2 + 8x + 6 = 0$

b. $0 = 6x^2 - 23x + 20$

f. $2 + 9x = 5x^2$

c. $100x^2 = 9$

g. $6x - 9 = x^2$

d. $0 = x^2 + 12x + 36$

h. $15x^2 + 10x = 0$

2. Graph $y = x^2 - 2x$. Identify the y -intercept, x -intercepts, and the vertex.

3. Find the coordinates of the y -intercept and x -intercepts of $y = x^2 - 2x - 15$.

Then find the vertex, identify the axis of symmetry and graph the parabola.

4. Given the following quadratic equation $x^2 + 2x - 3 = 0$

a. Re-write the equation in graphing form. _____ b. Solve for the **exact** values of the x -intercepts.

(_____ , _____) & (_____ , _____)

c. Identify the vertex (_____ , _____) d. Identify the y intercept (_____ , _____) e. Identify the axis of symmetry _____

f. Graph the equation. **Be sure to label the axis of symmetry and vertex.**

5. Solve $\frac{|a-5|}{8} = 5$

6. Simplify completely. No decimals or negative exponents.

a. $\frac{(x^{-3})^4 x^4}{2x^{-3}}$

b. $(4xy^3)^2(-2x^{-2}y)^3$

7. Write the rule (in standard form) for the given table.

x	-2	-1	0	1	2	3
y	4	0	-2	-2	0	4

8. Write the rule (in standard form) for the given parabola.

